



# Global Innovation Index 2021



## NAMIBIA

**100th** Namibia ranks 100th among the 132 economies featured in the GII 2021.

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Namibia over the past three years, noting that data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Namibia in the GII 2021 is between ranks 96 and 106.

### Rankings for Namibia (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	100	88	110
2020	104	101	104
2019	101	99	103

- Namibia performs better in innovation inputs than innovation outputs in 2021.
- This year Namibia ranks 88th in innovation inputs, higher than both 2020 and 2019.
- As for innovation outputs, Namibia ranks 110th. This position is lower than both 2020 and 2019.

**32nd** Namibia ranks 32nd among the 34 upper middle-income group economies.

**6th** Namibia ranks 6th among the 27 economies in Sub-Saharan Africa.

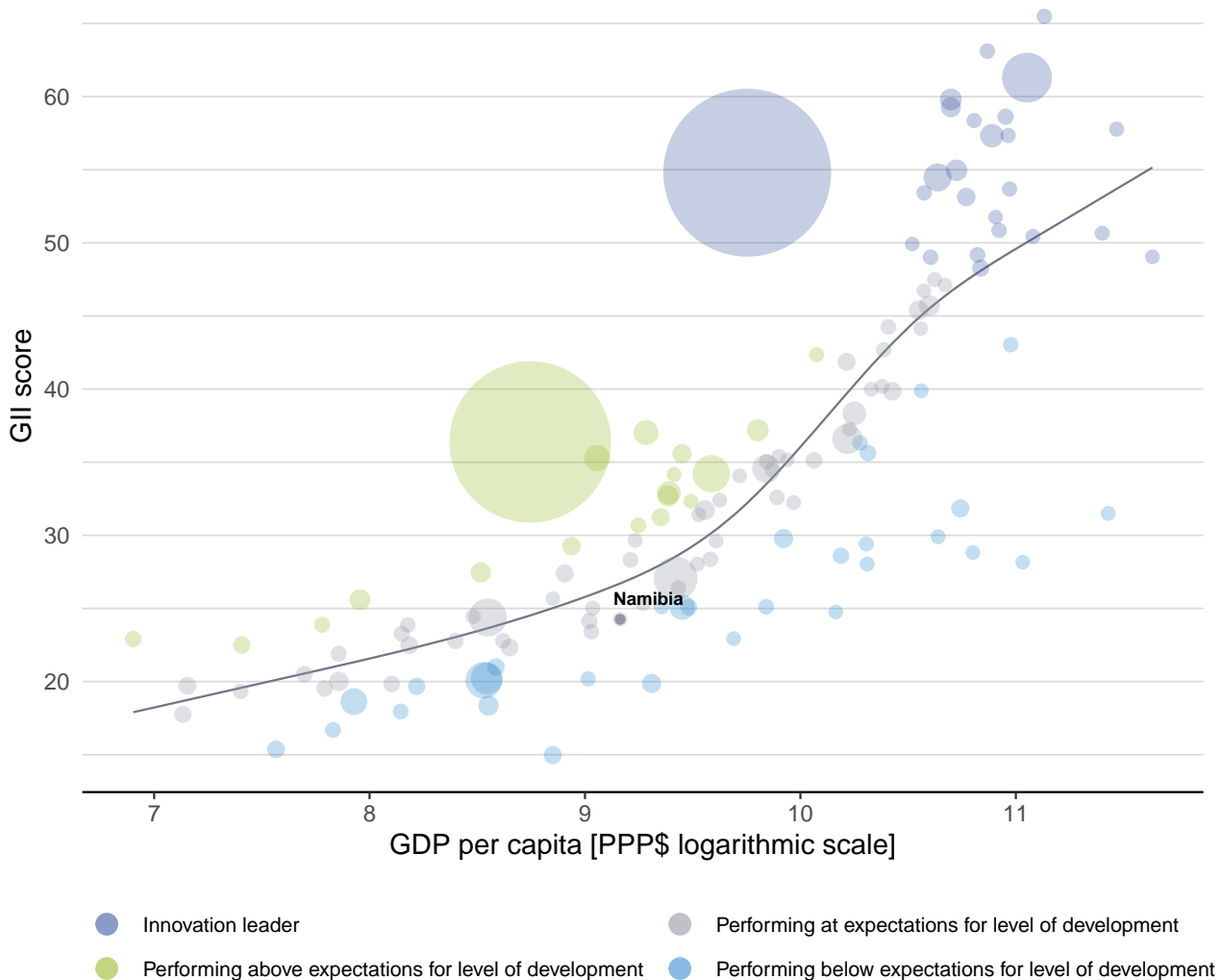


## EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.

Relative to GDP, Namibia's performance is at expectations for its level of development.

### The positive relationship between innovation and development



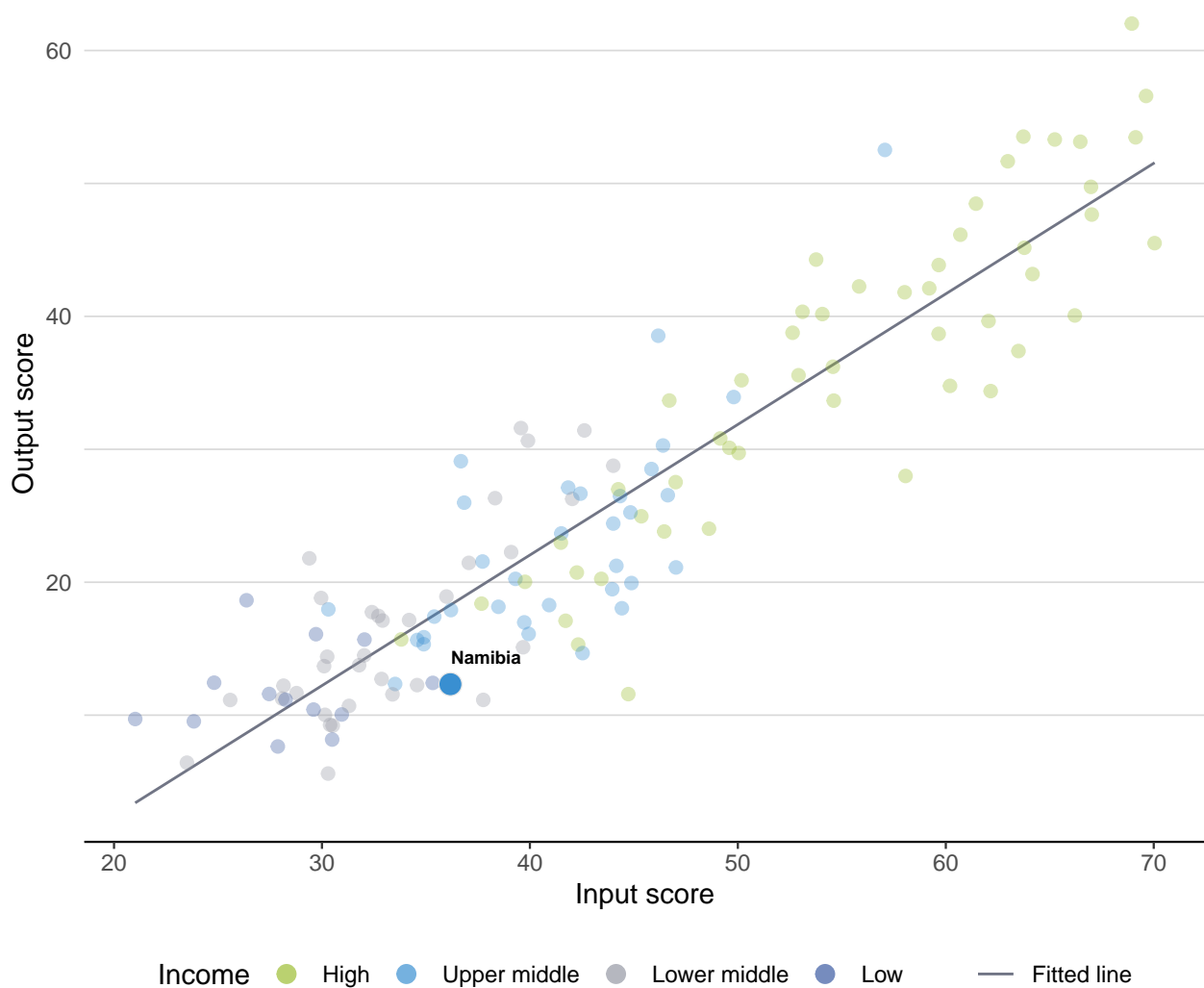


## EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Namibia produces less innovation outputs relative to its level of innovation investments.

**Innovation input to output performance**





## BENCHMARKING AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND SUB-SAHARAN AFRICA

### The seven GII pillar scores for Namibia

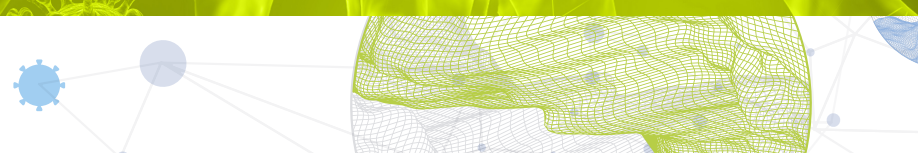


#### Upper middle-income group economies

Namibia performs above the upper middle-income group average in two pillars, namely: Institutions; and, Human capital and research.

#### Sub-Saharan Africa

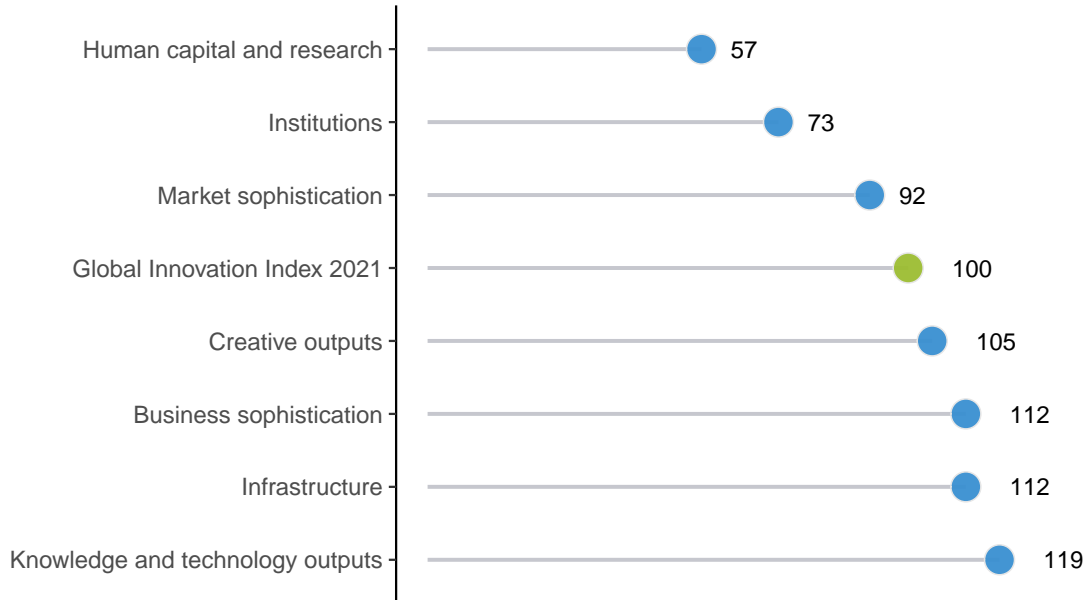
Namibia performs above the regional average in four pillars, namely: Institutions; Human capital and research; Market sophistication; and, Creative outputs.



## OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Namibia performs best in Human capital and research and its weakest performance is in Knowledge and technology outputs.

### The seven GII pillar ranks for Namibia



Note: The highest possible ranking in each pillar is one.










## INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Namibia in the GII 2021.

### Strengths and weaknesses for Namibia

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.2	Regulatory environment	43	1.3	Business environment	120
1.2.2	Rule of law	50	1.3.1	Ease of starting a business	120
1.2.3	Cost of redundancy dismissal	28	2.2.2	Graduates in science and engineering, %	101
2.1.1	Expenditure on education, % GDP	1	2.3.3	Global corporate R&D investors, top 3, mn US\$	41
2.2.3	Tertiary inbound mobility, %	39	2.3.4	QS university ranking, top 3	74
3.3.1	GDP/unit of energy use	42	3.2	General infrastructure	129
4.1.2	Domestic credit to private sector, % GDP	45	3.2.3	Gross capital formation, % GDP	117
4.3.1	Applied tariff rate, weighted avg., %	13	4.3.3	Domestic market scale, bn PPP\$	126
7.1.3	Industrial designs by origin/bn PPP\$ GDP	36	5.3	Knowledge absorption	120
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	42	5.3.1	Intellectual property payments, % total trade	115
7.3.4	Mobile app creation/bn PPP\$ GDP	34	6.2	Knowledge impact	120
			6.2.1	Labor productivity growth, %	113
			6.2.5	High-tech manufacturing, %	100
			6.3.4	ICT services exports, % total trade	124
			7.1.2	Global brand value, top 5,000, % GDP	80

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
110	88	Upper middle	SSF	2.5	24.1	9,537	104

	Score/Value	Rank		Score/Value	Rank
 <b>Institutions</b>	61.9	73	 <b>Business sophistication</b>	17.0	112
<b>1.1 Political environment</b>	59.0	61	<b>5.1 Knowledge workers</b>	17.3	107
1.1.1 Political and operational stability*	71.4	54	5.1.1 Knowledge-intensive employment, %	⊙ 18.1	87
1.1.2 Government effectiveness*	52.8	66	5.1.2 Firms offering formal training, %	⊙ 25.4	62
<b>1.2 Regulatory environment</b>	72.2	43 ●	5.1.3 GERD performed by business, % GDP	⊙ 0.0	77
1.2.1 Regulatory quality*	40.7	77	5.1.4 GERD financed by business, %	⊙ 11.1	75
1.2.2 Rule of law*	54.9	50 ● ◆	5.1.5 Females employed w/advanced degrees, %	⊙ 7.4	85
1.2.3 Cost of redundancy dismissal	9.7	28 ●	<b>5.2 Innovation linkages</b>	19.1	74
<b>1.3 Business environment</b>	54.6	120 ○ ◇	5.2.1 University-industry R&D collaboration†	42.8	64
1.3.1 Ease of starting a business*	72.2	120 ○ ◇	5.2.2 State of cluster development and depth†	44.6	79
1.3.2 Ease of resolving insolvency*	36.9	109 ○ ◇	5.2.3 GERD financed by abroad, % GDP	⊙ 0.1	49
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	50
			5.2.5 Patent families/bn PPP\$ GDP	0.1	55
 <b>Human capital and research</b>	32.9	57	<b>5.3 Knowledge absorption</b>	14.6	120 ○ ◇
<b>2.1 Education</b>	82.5	[1]	5.3.1 Intellectual property payments, % total trade	0.0	115 ○ ◇
2.1.1 Expenditure on education, % GDP	⊙ 8.3	1 ● ◆	5.3.2 High-tech imports, % total trade	7.4	71
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.3 ICT services imports, % total trade	0.6	98
2.1.3 School life expectancy, years	n/a	n/a	5.3.4 FDI net inflows, % GDP	0.8	109 ○ ◇
2.1.4 PISA scales in reading, maths and science	n/a	n/a	5.3.5 Research talent, % in businesses	⊙ 6.9	67
2.1.5 Pupil-teacher ratio, secondary	⊙ 25.9	106 ○ ◇	 <b>Knowledge and technology outputs</b>	9.4	119 ○ ◇
<b>2.2 Tertiary education</b>	14.0	104 ○ ◇	<b>6.1 Knowledge creation</b>	7.9	89
2.2.1 Tertiary enrolment, % gross	24.1	92 ○ ◇	6.1.1 Patents by origin/bn PPP\$ GDP	0.4	84
2.2.2 Graduates in science and engineering, %	12.9	101 ○ ◇	6.1.2 PCT patents by origin/bn PPP\$ GDP	0.2	49
2.2.3 Tertiary inbound mobility, %	⊙ 6.1	39 ●	6.1.3 Utility models by origin/bn PPP\$ GDP	0.3	43
<b>2.3 Research and development (R&amp;D)</b>	2.1	92	6.1.4 Scientific and technical articles/bn PPP\$ GDP	12.0	71
2.3.1 Researchers, FTE/mn pop.	⊙ 149.5	83 ○ ◇	6.1.5 Citable documents H-index	4.9	107
2.3.2 Gross expenditure on R&D, % GDP	⊙ 0.4	75	<b>6.2 Knowledge impact</b>	13.0	120 ○ ◇
2.3.3 Global corporate R&D investors, top 3, mn US\$	0.0	41 ○ ◇	6.2.1 Labor productivity growth, %	-3.1	113 ○ ◇
2.3.4 QS university ranking, top 3*	0.0	74 ○ ◇	6.2.2 New businesses/th pop. 15-64	⊙ 1.2	79
 <b>Infrastructure</b>	27.2	112 ○ ◇	6.2.3 Software spending, % GDP	0.1	88
<b>3.1 Information and communication technologies (ICTs)</b>	46.0	98 ○ ◇	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	1.7	92
3.1.1 ICT access*	46.0	96 ○ ◇	6.2.5 High-tech manufacturing, %	⊙ 4.7	100 ○ ◇
3.1.2 ICT use*	35.8	101 ○ ◇	<b>6.3 Knowledge diffusion</b>	7.4	105
3.1.3 Government's online service*	52.3	99 ○ ◇	6.3.1 Intellectual property receipts, % total trade	0.0	94
3.1.4 E-participation*	50.0	103 ○ ◇	6.3.2 Production and export complexity	33.9	80
<b>3.2 General infrastructure</b>	9.7	129 ○ ◇	6.3.3 High-tech exports, % total trade	0.9	73
3.2.1 Electricity output, GWh/mn pop.	488.6	108 ○ ◇	6.3.4 ICT services exports, % total trade	0.2	124 ○
3.2.2 Logistics performance*	n/a	n/a	 <b>Creative outputs</b>	15.2	105 ○ ◇
3.2.3 Gross capital formation, % GDP	14.6	117 ○ ◇	<b>7.1 Intangible assets</b>	19.6	101
<b>3.3 Ecological sustainability</b>	26.0	78	7.1.1 Trademarks by origin/bn PPP\$ GDP	18.9	94
3.3.1 GDP/unit of energy use	12.5	42 ●	7.1.2 Global brand value, top 5,000, % GDP	0.0	80 ○ ◇
3.3.2 Environmental performance*	40.2	88 ○ ◇	7.1.3 Industrial designs by origin/bn PPP\$ GDP	3.1	36 ●
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	0.7	76	7.1.4 ICTs and organizational model creation†	46.7	95
 <b>Market sophistication</b>	41.8	92	<b>7.2 Creative goods and services</b>	2.3	[115]
<b>4.1 Credit</b>	35.6	85	7.2.1 Cultural and creative services exports, % total trade	⊙ 0.1	90
4.1.1 Ease of getting credit*	60.0	74	7.2.2 National feature films/mn pop. 15-69	n/a	n/a
4.1.2 Domestic credit to private sector, % GDP	72.0	45 ●	7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a
4.1.3 Microfinance gross loans, % GDP	⊙ 0.0	65	7.2.4 Printing and other media, % manufacturing	n/a	n/a
<b>4.2 Investment</b>	31.5	[66]	7.2.5 Creative goods exports, % total trade	0.2	77
4.2.1 Ease of protecting minority investors*	56.0	82	<b>7.3 Online creativity</b>	19.4	58
4.2.2 Market capitalization, % GDP	20.8	58	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	8.9	42 ● ◆
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	n/a	n/a	7.3.2 Country-code TLDs/th pop. 15-69	0.9	90
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	n/a	n/a	7.3.3 Wikipedia edits/mn pop. 15-69	52.6	62
<b>4.3 Trade, diversification, and market scale</b>	58.4	99	7.3.4 Mobile app creation/bn PPP\$ GDP	15.0	34 ●
4.3.1 Applied tariff rate, weighted avg., %	1.1	13 ●			
4.3.2 Domestic industry diversification	⊙ 68.7	99 ○ ◇			
4.3.3 Domestic market scale, bn PPP\$	24.1	126 ○ ◇			

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; \* an index; † a survey question. ⊙ indicates that the economy's data are older than the base year; see Appendix IV for details, including the year of the data, at <http://globalinnovationindex.org>. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.





## DATA AVAILABILITY

The following tables list data that are either missing or outdated for Namibia.

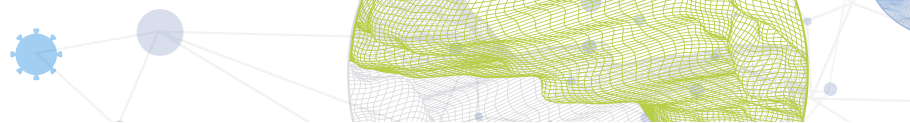
### Missing data for Namibia

Code	Indicator name	Economy year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2017	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2018	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD Programme for International Student Assessment (PISA)
3.2.2	Logistics performance	n/a	2018	World Bank
4.2.3	Venture capital investors, deals/bn PPP\$ GDP	n/a	2020	Refinitiv Eikon
4.2.4	Venture capital recipients, deals/bn PPP\$ GDP	n/a	2020	Refinitiv Eikon
7.2.2	National feature films/mn pop. 15–69	n/a	2017	UNESCO Institute for Statistics
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC
7.2.4	Printing and other media, % manufacturing	n/a	2018	United Nations Industrial Development Organization

### Outdated data for Namibia

Code	Indicator name	Economy year	Model year	Source
2.1.1	Expenditure on education, % GDP	2010	2017	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2017	2019	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2017	2018	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2014	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2014	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators





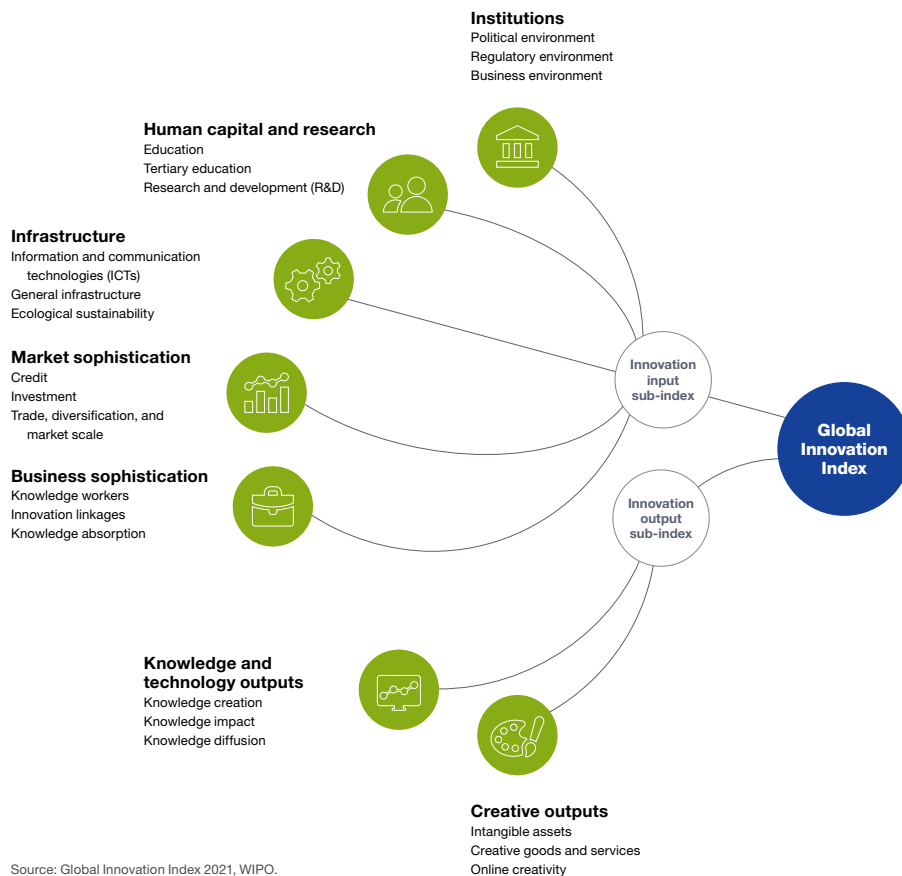
Code	Indicator name	Economy year	Model year	Source
4.1.3	Microfinance gross loans, % GDP	2012	2018	Microfinance Information Exchange
4.3.2	Domestic industry diversification	2015	2018	United Nations Industrial Development Organization
5.1.1	Knowledge-intensive employment, %	2018	2019	International Labour Organization
5.1.2	Firms offering formal training, %	2014	2019	World Bank
5.1.3	GERD performed by business, % GDP	2014	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2014	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2018	2019	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	2014	2018	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	2014	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.2.2	New businesses/th pop. 15–64	2016	2018	World Bank
6.2.5	High-tech manufacturing, %	2015	2018	United Nations Industrial Development Organization
7.2.1	Cultural and creative services exports, % total trade	2018	2019	World Trade Organization



## ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.

Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a “tool for action” for economies that incorporate the GII into their innovation agendas.



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.